

TITLE

MULTI-LAYER SUBSTRATES HAVING AT LEAST TWO DISSIMILAR
POLYIMIDE LAYERS AND A CONDUCTIVE LAYER, USEFUL FOR
ELECTRONICS-TYPE APPLICATIONS, AND COMPOSITIONS
RELATING THERETO

ABSTRACT

The present invention relates to a multi-layer laminate having a low
glass transition temperature polyimide layer, a high glass transition
temperature polyimide layer, and a conductive layer.

The low glass transition temperature polyimide layer is synthesized
by contacting an aromatic dianhydride with a diamine component, the
diamine component comprising about 50 to about 90 mole % aliphatic
diamine (the remainder being aromatic diamine) having the structural
formula $H_2N-R-NH_2$ wherein R is hydrocarbon from C_4 to C_{16} . The low
glass transition polyimide is an adhesive and has a glass transition
temperature in the range of from $150^{\circ}C$ to $200^{\circ}C$.

The high glass transition temperature polyimide layer has a glass
transition temperature above the low glass transition temperature
polyimide layer and is a thermoset polyimide.

A multi-layer-layer substrate of the present invention has the high
glass transition temperature polyimide layer positioned between the
conductive layer and the low glass transition polyimide, or optionally
contains an additional low glass transition temperature polyimide
positioned between the conductive layer and the high glass transition
polyimide layer.

KK/dmm